

SECTION XI. THE RELATIONSHIP OF THE ORE DEPOSIT
FORMATIONS TO MAGMA AND TECTONICS IN NORTHWESTERN,
CENTRAL, AND SOUTHEASTERN EUROPE

Introduction:

The considerable volume of this research project made it necessary to divide the huge area under discussion into separate sections (Ore Regions). The regularities in the distribution of ore deposits within these sections were treated for each area, and the relationship of the mineralisations to tectonics and magma were determined.

However, in order to discuss the primary topic, it was first necessary to deal with the still conflicting points of view concerning the structure of the mountain ranges, the age of the mountain formations, and the magmatic phases, and to draw up a geological summary which could then be used as a basis for further research. In this connection questions arise, such as the cover structure of the Alps and the Carpathians, the origin of the magmata, and others which are of fundamental nature and have not yet been definitely answered. It is thus entirely possible that some of the basic views expressed here will have to be altered in the light of later research. However, such modifications will affect only certain sectors; the research findings presented here may be somewhat changed, but will certainly not be invalidated.

Another task was to compile a complete listing of the ore deposits for each individual region, including even those which have no practical significance. For Central Europe, this task was not difficult, but for some of the Southeastern European Countries it could be done only from evaluation of personal data and unpublished literature. It was frequently very difficult to obtain the proper conception of the genesis and the age conditions of the mineralisation on the basis of the literature; often it was even impossible to determine the exact location of some of the deposits. In such uncertain cases, they were listed together with better known deposits in the immediate vicinity.

A thorough knowledge of the geological - tectonic conditions and the distribution of the ore deposits provided the basis for each individual area, on which the relationship of the magmatic ore deposits to the magma could be discussed. This showed relationship between the uprise of the magma and the mineralisation, and joint dependence on the formation of mountains. An attempt was made to classify the magmatic processes and the corresponding mineralisation by the individual orogenic phases. This attempt succeeded in a few cases where the conditions were favorable. An attempt will therefore be made now, at the completion of the rest of the project, to classify the ore deposits in the individual orogenic phases for the entire over-all area, using the sectors mentioned above as a basis.

This concluding part also includes a discussion of the sectors "Northwest Germany" and "The Core of the Bohemian Mass", in order to complete the total area discussed. Since time was running short, these two sectors could not be covered as thoroughly as the preceding ones.

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